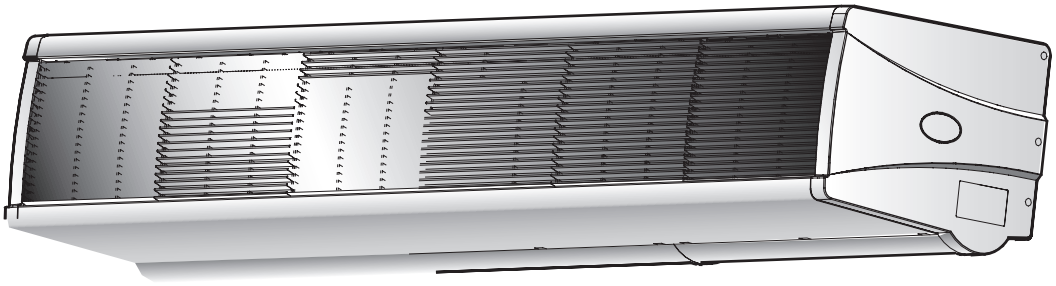
Dimplex



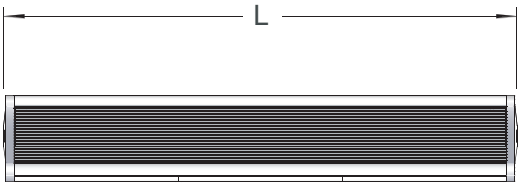
CAB & DAB

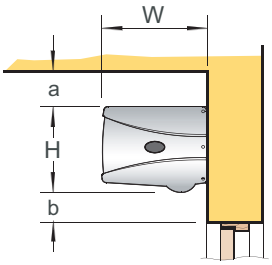
CAB10A, CAB10E, CAB10W, CAB15A, CAB15E & CAB15W
DAB10A, DAB10E, DAB10W, DAB15A, DAB15E & DAB15W

08/19023/6 (UK) Issue 6

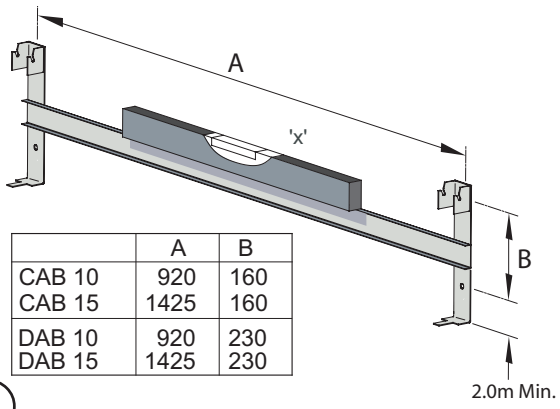
CE The product complies with the European Safety Standards EN60335-2-30 and the European Standard Electromagnetic Compatibility (EMC) EN55014, EN60555-2 and EN60555-3 which cover the essential requirements of EEC Directives 73/23 and 89/336

1



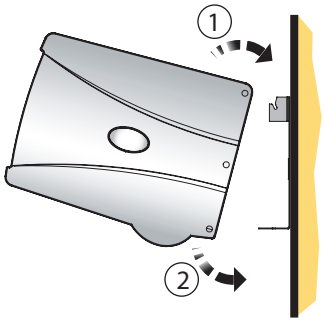


	L	W	H
CAB 10 E/W/A	1065	320	262
CAB 15 E/W/A	1569	320	262
DAB 10 E/W/A	1057	391	361
DAB 15 E/W/A	1557	391	361



	A	B
CAB 10 CAB 15	920 1425	160 160
DAB 10 DAB 15	920 1425	230 230

2



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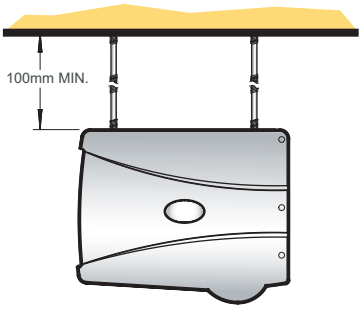

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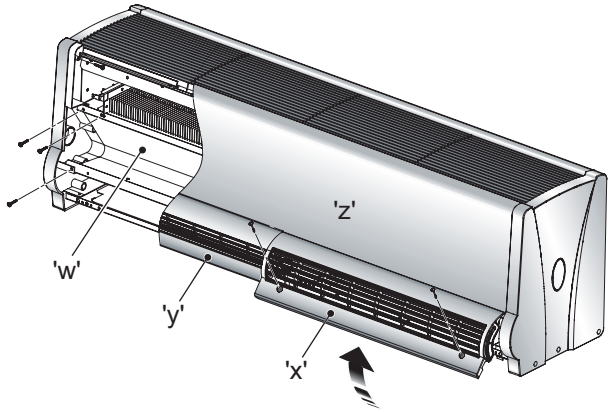

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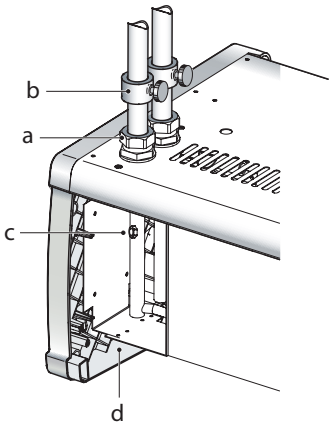

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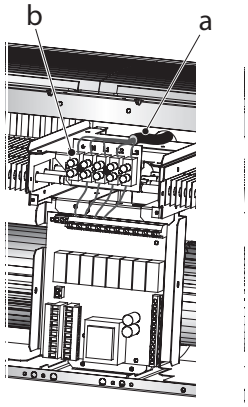
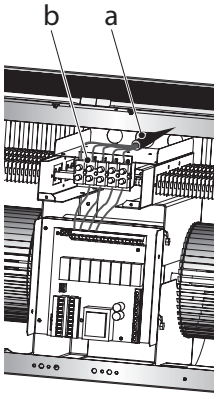
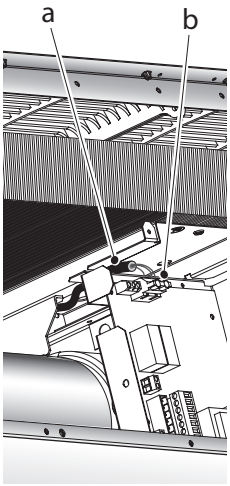


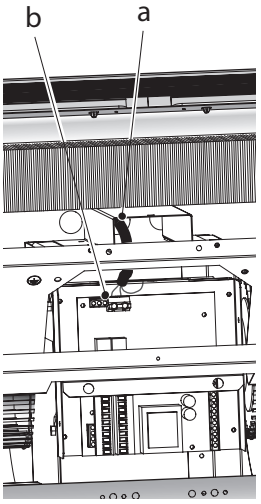
6A CAB E



6B DAB E

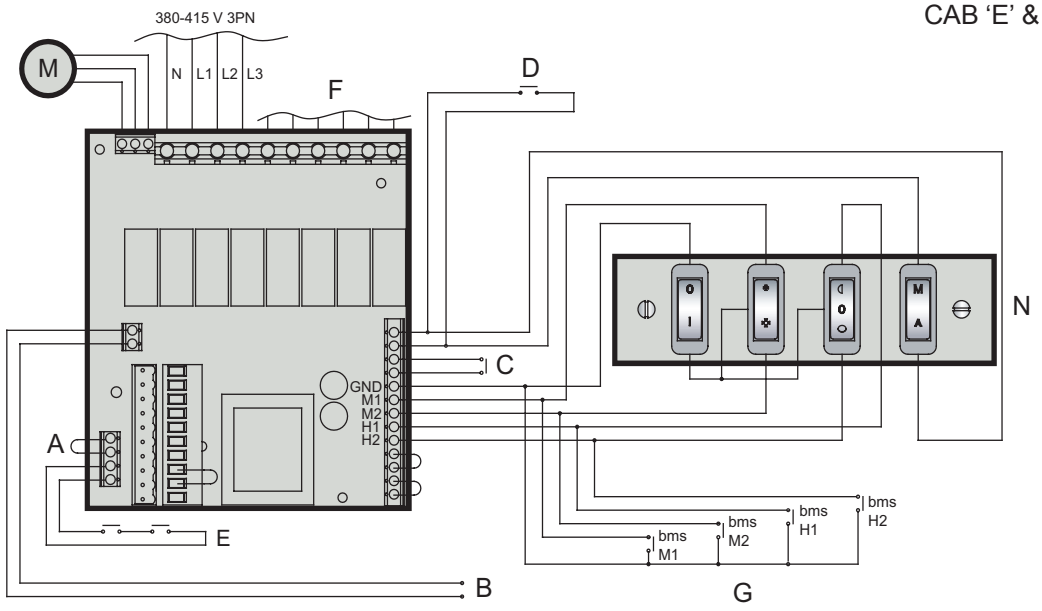


6C CAB W / A



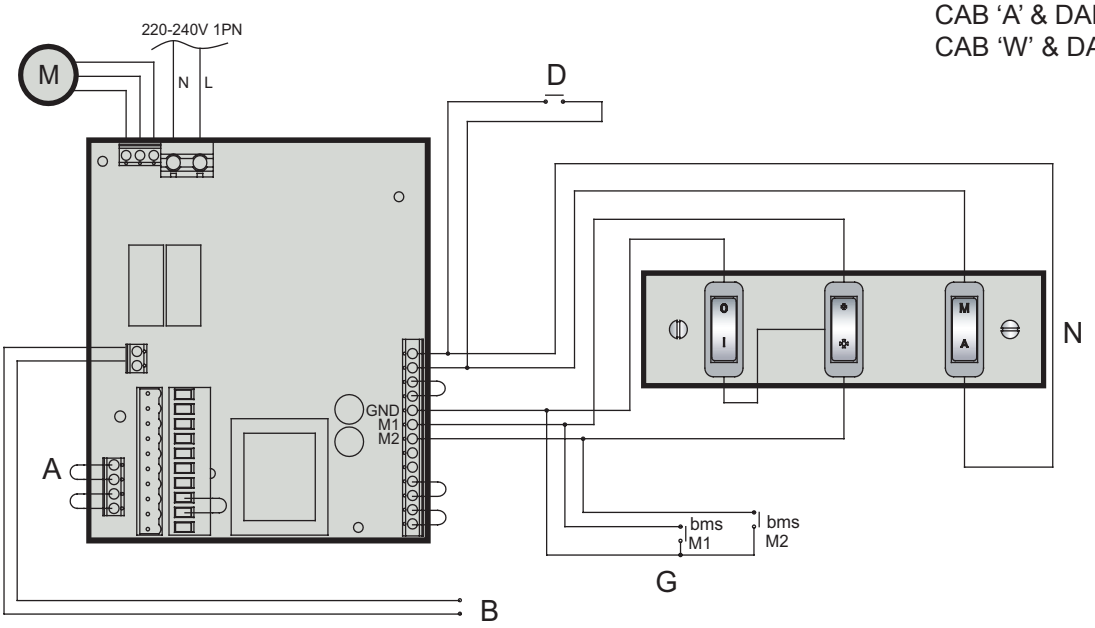
6D DAB W / A

CAB ‘E’ & DAB ‘E’



7

CAB ‘A’ & DAB ‘A’
CAB ‘W’ & DAB ‘W’



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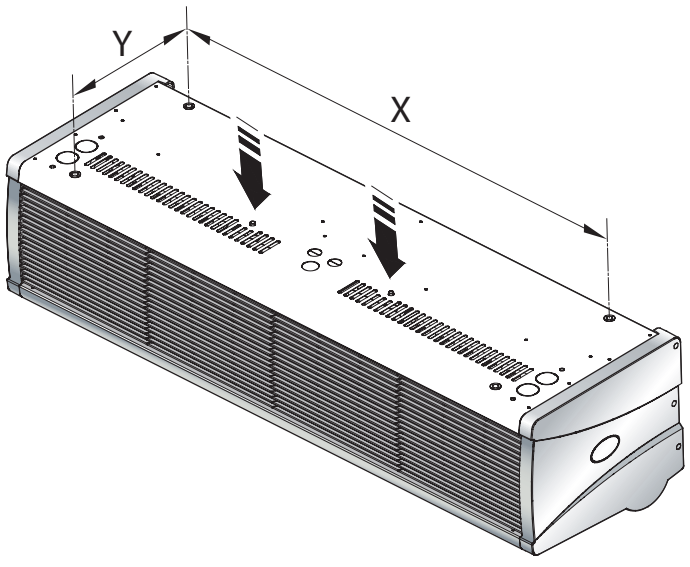

	X	Y
CAB 10	840	240
CAB 15	1260	240
DAB 10	800	300
DAB 15	1300	300

9

Dimplex Compact Air Curtains
Models : CAB10E, CAB15E, CAB10W, CAB15W, CAB10A, & CAB15A
DAB10E, DAB15E, DAB10W, DAB15W, DAB10A, & DAB15A

IMPORTANT: THESE INSTRUCTIONS SHOULD BE READ CAREFULLY AND RETAINED FOR FUTURE REFERENCE

IMPORTANT SAFETY ADVICE

DO NOT COVER OR OBSTRUCT the air inlet or outlet grille.

ENSURE THE APPLIANCE IS EARTHED.

Do not use this heater in areas where excessive dust exists.

This heater must not be located immediately above or below a fixed socket outlet or connection box.

Always disconnect supply before working on the product.

This appliance should only be connected to the fixed wiring of the premises by means of conduit.

This product should be mounted safely to solid wall or ceiling surfaces only.

This product must not be subjected to water spray or immersion.

Ensure the supply cables are of adequate current carrying capacity and are protected by a suitable fuse.

If the appliance is mounted in a toilet or washroom, the appliance should be mounted such that no part of it can be touched by a person using a fixed bath or shower.

If the appliance is mounted in a toilet or washroom an isolating switch must be provided outside the washroom adjacent to the entrance door.

WARNING: Isolate electrical supply to ALL modular linked units when carrying out maintenance.

Models

Model	Heat output kW	Electrical Supply	Electrical load (per phase) A	Weight kg	Max Installed height m
AMBIENT / COLD STORE					
CAB10A	n/a	220-240V ~1PN	0.3	15.5	3.0
CAB15A	n/a	220-240V ~1PN	0.5	21.5	3.0
DAB10A	n/a	220-240V ~1PN	1.5	21.5	4.0
DAB15A	n/a	220-240V ~1PN	2.3	27.5	4.0
ELECTRICALLY HEATED					
CAB10E	4.5 / 9.0	380-415V ~3PN	14	20.5	3.0
CAB15E	6.75 / 13.5	380-415V ~3PN	20	29	3.0
DAB10E	6.0 / 12.0	380-415V ~3PN	18	26.5	4.0
DAB15E	9.0 / 18.0	380-415V ~3PN	27	35	4.0
WATER HEATED (at 82/71 °C - LPHW)**					
CAB10W	9.0	220-240V ~1PN	0.3	17.7	3.0
CAB15W	13.5	220-240V ~1PN	0.5	24.6	3.0
DAB10W	12.0	220-240V ~1PN	1.5	24.7	4.0
DAB15W	18.0	220-240V ~1PN	2.3	31.9	4.0

Electrical

The installation of this appliance should be carried out by a competent electrician and be in accordance with the current IEE wiring regulations.

Fixing Positions

This appliance may be either wall-mounted or fixed to a ceiling - see **Fig. 3a & 3b** for fixing positions and 'Mounting' sections below for fixing details.

A minimum distance of 100mm is required from the top of the appliance to ceiling - see 'a' in **Fig. 1.**

The distance between the bottom of the appliance and the top of a door should be kept to a minimum - see 'b' in **Fig. 1**.

Wall Mounting

Using the wall mounting bracket as a guide (see **Fig. 2**) mark off hole positions on the wall (a minimum height of 2.0 metres is required from the floor level to the bottom of the bracket). Position the bracket such that the air outlet of the installed air curtain will be as close to the top of the doorway as possible but will remain unobstructed when installation is complete.

Solid brick or concrete block walls must be drilled and plugged (using a spirit level as a guide - see 'x' in **Fig. 2** - to ensure the bracket is level) with rawlplug No. 8 size fibre inserts. The plug must be located in the solid part of the wall and not just in the plaster layer.

When fixing to 'panel' walls, the wall bracket should be attached to the stud-work using No. 8 wood screws or by an alternative, equally secure method of fixing.

Once the wall bracket has been fitted, the air curtain can be clipped in place as shown in **Fig. 3a**.

Ceiling Mounting

By using threaded inserts in the top panel of the air curtain, attachment to a ceiling over the product can be achieved using suitable M8 threaded steel rod or similar supports of sufficient strength - see **Fig. 3b**.

Electrical connection

All products are fitted with a microprocessor control. Electrical power and control connections are made as shown in **Fig. 6**. A suitable local isolating switch must be provided in the electrical supply circuit with at least 3mm clearance on each pole.

In order to access the electrical connections, remove the outlet grilles ('x' and 'y' in **Fig. 4**) by releasing the quick release fasteners and hinging the mouldings as shown and then remove the bottom panel ('z' in **Fig. 4**).

For the Water heated and Ambient models only, the pressure plate ('w' in **Fig. 4**) must also be removed.

All CAB Electric Models - Having removed a 'knock out' in the top panel, feed an appropriate supply cable (see 'a' in **Fig. 6A**) through a suitable cable gland (not supplied) fitted in the top panel and attach to the terminal block (see 'b' in **Fig. 6A**).

All DAB Electric Models - Having removed a 'knock out' in the top panel, feed an appropriate supply cable (see 'a' in **Fig. 6B**) through a suitable cable gland (not supplied) fitted in the top panel and attach to the terminal block (see 'b' in **Fig. 6B**).

All Water heated and Ambient Models - Having removed a 'knock out' in the top panel, feed an appropriate supply cable (see 'a' in **Fig. 6C**) through a suitable cable gland (not supplied) fitted in the top panel and attach to the PCB (see 'b' in **Fig. 6C**).

A suitable cable for a switch panel (kit ref. - CABC1 for electrically heated models or CABC2 for water heated/ambient models) can be similarly introduced through the top panel and connected to the circuit board. If the unit is to be operated in conjunction with a door switch, a normally closed switch should be wired as per **Fig. 7 & 8** as appropriate - see also 'Switch Panel Instructions'.

If the unit is to be connected to a Building Energy Management System, connections are made as per **Fig. 7 & 8** as appropriate. Ensure that the air curtain is securely fastened in position and that the supply cables are firmly clamped before operating the appliance.

Water connection

Models designed for use in conjunction with a low pressure hot water supply should be individually connected (in a parallel circuit) to the flow and return pipe-work. Connections (see 'a' in **Fig. 5**) are: ½" BSPT (CAB series) and ¾" BSPT (DAB series) and isolation valves (see 'b' in **Fig. 5**) should be fitted as close to the air curtain connection points as possible. For commissioning, air bleed valves (see 'c' in **Fig. 5**) are fitted to the coil, which can be accessed by removal of the bottom panel and intake grille assembly - see **Fig. 4**. The drain (see 'd' in **Fig. 5**) can also be accessed when the intake grille assembly and bottom panel are removed.

Maximum water supply conditions are 125ºC and 8 bar (0.8MPa).

To aid installation, the water coil connections may be moved to either side of the appliance. By removing the water coil and appropriate knockouts the water coil can then be re-inserted into the required orientation. This procedure should be carried out before mounting the appliance.

Electrically heated variants

Operation using switch box - CABC1

Switch on electrical supply to the air curtain. Switching the switch marked '**I**' energises the fan. The fan switch allows either low or high fan speeds to be selected. The heat selection switch allows heat setting to be chosen.

- O - **Off**
- ◖ - **½ heat**
- ● - **Full heat**

The A / M (auto / manual) switch allows for manual over-ride of a door switch if fitted.

The unit should always be switched OFF using the switch box control, and not by mains power supply interruption.

When the unit is switched off (via the switch box) the fan will run on for 1 minute without heat to discharge any residual energy from the heating elements.

When first turned on the control will run through a system check. The selected settings will be reached and maintained after a 3 minute period.

Thermostatic control

A capillary type thermostat is factory fitted within the unit, as per 'C' in **Fig. 7**, giving a selection scale of 0-40ºC. When the thermostat operates, the power output will reduce depending on the switch setting.

- O - Fan only - No effect
- ◖ - Half Heat - Heater will reduce to Fan only
- ● - Full Heat - Heater will reduce to Half Heat

To override the thermostat, first Isolate the supply to the heater. Remove the connection on terminal '1' of the thermostat and reconnect it onto the piggy back connection on terminal 'C'.

Door switch control (Electric models)

By including a door switch in the circuit (as per 'D' in **Fig. 7**) the air curtain will respond to door openings as follows:

(1) Door opening will energise the air curtain at the set conditions (switch box settings).
(2) On door closure operation will continue at the set conditions for a further 1 minute.
(3) Between 1 minute and 2 minutes from door closure, set back operation, ½ heat (if heat selected) and ½ fan will activate.
(4) Between 2 minutes and 3 minutes, the fan only (½ speed) shut down cycle will be engaged.
(5) After 3 minutes, the air curtain will return to a dormant state until the door is re-opened.
If the door re-opens during this 3 minute run on cycle, the process will restart at (1).

Thermal Safety cut outs

The power supply to the heating elements will be interrupted if one or a combination of the following abnormal events occur:

1. Air inlet or outlet grilles are obstructed.
2. Internal ventilation is impaired due to build up of dust and fluff.
3. Blower unit stalls.

To reset the thermal safety cut-outs, access reset buttons as shown in **Fig. 9**. Before re-setting the reason for activation must be determined and corrective action taken.

Low pressure hot water heated / Ambient (fan only) variants

Operation using switch box - CABC2

Switching the switch marked 'I' energises the fan.

The fan switch allows either low or high fan speeds to be selected.

The A / M (auto / manual) switch allows for manual over-ride of a door switch if fitted.

The unit should always be switched OFF using the switch box control, and not by mains power supply interruption.

When first turned on the control will run through a system check. The selected settings will be reached and maintained after a 3 minute period.

Thermostatic control (optional)

A thermostatic regulation valve with a remote sensing bulb (not supplied) can be positioned in the supply water pipe-work to regulate the heat output.

Door switch control (Water heated & Ambient models)

By including a door switch in the circuit (as per 'D' in **Fig. 8**) the air curtain will respond to door openings as follows:

(1) Door opening will energise the air curtain at the set conditions (switch box settings).
(2) On door closure operation will continue at the set conditions for a further 1 minute.
(3) Between 1 minute and 2 minutes from door closure ½ fan set back operation will activate.
(4) After 2 minutes, the air curtain will return to a dormant state until the door is re-opened. If the door re-opens during this 2 minute run on cycle, the process will re-start at (1).

Wiring Diagrams

CAB & DAB 'E' - Electric models - see Fig. 7

CAB & DAB 'W' / 'A' - Water heated & Ambient models - see Fig. 8

A- Master Module Link
B - 12VDC Feedback Signal to BMS (Unit Fault Check)
C - Thermostat
D - Door Switch (Optional)
E - Thermal Safety Cut-out Circuit
F - Elements
G - BMS Switches (Optional)
M - Motor
N - Switch box

For operation via switch box, all BMS switches as shown in **Fig. 7 & 8** need to be OPEN CIRCUIT if used. Do not remove BMS links on PCB.

For operation via BMS, switch box to be set as follows:

I/0 in **O** (Off) position
Heat selection switch to be in **O** (Off position)
Fan selection switch in either high or low speed position

	bms M1	bms M2	bms H1	bms H2
	1	O		
	X	1		

◖			1	O
●			X	1

O - Circuit Open
1 - Circuit Closed
X - Either Open or Closed

Remote (BMS / BEMS) Operation

Connection to Building Energy Management Control Systems (BEMS) is possible so that remote control of the air curtain can be carried out in conjunction with other equipment.

Modular Connection

Refer to instructions provided with the modular linking kit.

Recessed Installation

Refer to instructions provided with the recess installation kit.

De-rating the unit to operate at 1/2 heat setting:

De-rating the unit to operate at 1/2 heat is done via the remote switch unit, once the cover/facia plate is removed from the backbox, access can be gained to the connection block inside - for details refer to Switch Panel Instructions.

To de-rate the unit to half heat setting, insert the wire for H2 from in with the wire for H1. By doing this the switch function will allow half heat setting in either half or full heat mode, provided the correct number of cores are fed to the switch unit this still allows possible reconnection to full heat at a later stage.

At half heat setting the units detailed within the table below will give the loadings stated.

	H2 connected to H1	
Model	**Heat Output**	**Loading per phase**
CAB10E	4.5kW	7.0A
CAB15E	6.75kW	10.0A
DAB10E	6.0kW	9.0A
DAB15E	9.0kW	13.5A

The CAB10E and CAB15E are primarily designed for 400V~ 3P&N 50Hz operation, however in the instance where it is not possible to utilise a 3-phase supply, the CAB10E & CAB15E units can be derated for operation via a 230V~ 1P&N 50Hz supply (please note that in 230V~ 1P&N, a maximum loading of 1/2 heat only will be applicable). To do this a kit will be needed please contact Dimplex for further information.

Recycling

For electrical products sold within the European Community.

At the end of the electrical products useful life it should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice in your country.

Cleaning

WARNING: DISCONNECT SUPPLY before carrying out maintenance.

External appearance can be maintained by wiping occasionally with a damp cloth ; for stain removal, a weak soap solution can be applied with a cloth and the surface wiped dry. Care must be taken to avoid any moisture ingress into the product.

After Sales Service

Your product is guaranteed for three years from the date of purchase.

Within this period, we undertake to repair or exchange this product free of charge provided it has been installed and operated in accordance with these instructions.

Your rights under this guarantee are additional to your statutory rights, which in turn are not affected by this guarantee.

Should you require after sales service you should contact our customer services help desk on 0845 600 5111. It would assist us if you can quote the model number, series, date of purchase, and nature of the fault at the time of your call. The customer services help desk will also be able to advise you should you need to purchase any spares.

Please do not return a faulty product to us in the first instance as this may result in loss or damage and delay in providing you with a satisfactory service.

Please retain your receipt as proof of purchase.

CE The product complies with the European Safety Standards EN60335-2-30 and the European Standard Electromagnetic Compatibility (EMC) EN55014, EN60555-2 and EN60555-3 which cover the essential requirements of EEC Directives 73/23 and 89/336

Glen Dimplex UK Limited
Millbrook House
Grange Drive
Hedge End
Southampton
Hampshire. SO30 2DF

UK customer help line (8.00AM – 6.00PM Mon-Fri; 8.30AM-1.00PM Sat)

Customer Services:	Tel.	0845 600 5111
	Fax.	01489 773053
	e-mail	customer.services@glendimplex.com
Republic of Ireland	Tel.	01 8424833

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